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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/745,157	12/20/2000	Jeffrey A. Korn	1006.01-US	7176

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EXAMINER

PHAN, HANH

ART UNIT PAPER NUMBER

2633

DATE MAILED: 05/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/745,157

Applicant(s)

KORN ET AL.

Examiner

Hanh Phan

Art Unit

2633

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-13, 15, 16, 21-28, 31 and 32 is/are rejected.
- 7) ☒ Claim(s) 14, 17-20, 29 and 30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is responsive to the Amendment filed on 11/10/2004.
2. In claim 26, line 2, the phrase "the channel inventory" should be changed to --the spectral feature--.
3. The indicated allowability of claims 8 and 26 is withdrawn in view of the newly discovered reference(s) to Vanoli et al (US Patent No. 5,943,147). Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-5, 8, 9, 15, 16, 21-24, 26-28, 31 and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Vanoli et al (US Patent No. 5,943,147 cited by applicant).

Regarding claims 1, 21, 22 and 31, referring to Figure 5, Vanoli discloses a scanning optical monitoring system, comprising:

a tunable optical filter (i.e., tunable optical filter 11, Fig. 5) that scans a pass band across a signal band of an input signal to generate a filtered signal corresponding to a spectrum of the input signal;

a photo detector (i.e., photo-detector 24, Fig. 5) that generates an electrical signal in response to the filtered signal (col. 12, lines 43-58);

a decision circuit (i.e., analysis and check circuit 25 and micro-processor 34, Fig. 5) that compares the electrical signal to a threshold (col. 17, lines 65-67, col. 18, lines 19-67 and col. 19, lines 1-24); and

a controller (i.e., micro-processor 34, Fig. 5) that is responsive to the decision circuit to identify spectral features in the input signal by comparing a spectral position of an instantaneous pass band of the tunable filter to a response of the decision circuit to determine the spectral features of the input signal (col. 12, lines 43-58, col. 18, lines 19-67 and col. 19, lines 1-24).

Regarding claims 2-4, 23 and 24, Vanoli further teaches a tunable optical filter tunes across the signal band in less than 1 millisecond (col. 12, lines 24-33).

Regarding claim 5, Vanoli further teaches the tunable optical filter is a Fabry-Perot filter (col. 11, lines 27-30).

Regarding claims 8 and 26, Vanoli further teaches the controller (i.e., micro-processor 34, Fig. 5) compares the spectral features to expected information to assess a validity of the input signal (col. 18, lines 19-26).

Regarding claim 9, Vanoli further teaches the tunable filter comprises an electrostatic drive cavity in which an electrostatic field is generated to displace a flexible membrane of the tunable filter (col. 11, lines 42-67 and col. 12, lines 1-37).

Regarding claims 15, 27 and 28, Vanoli further teaches the controller generates a threshold set signal the specifies a level of the threshold applied by the decision circuit (col. 11, lines 42-67 and col. 12, lines 1-37).

Regarding claim 16, Vanoli further teaches a filter tuning voltage generator that generates a tuning voltage to the optical tunable filter (Fig. 5).

Regarding claim 32, Vanoli further teaches the input signal is a wavelength division signal and the spectral features are an inventory of WDM channels (col. 7, lines 45-55).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 6 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vanoli et al (US Patent No. 5,943,147 cited by applicant) in view of Bach et al (US Patent No. 6,606,354).

Regarding claims 6 and 25, Vanoli teaches all the limitations of the claimed invention as set forth in the rejection to claims 1 and 22 above except fails to teach an

Art Unit: 2633

electronic filter that low pass filters the electronic signal from the photo detector.

However, Bach teaches an electronic filter (i.e., low pass filter 3, Fig. 2) that low pass filters the electronic signal from the photo detector (col. 3, lines 27-61 and col. 4, lines 1-20). Therefore, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the electronic filter that low pass filters the electronic signal from the photo detector as taught by Bach in the system of Vanoli. One of ordinary skill in the art would have been motivated to do this since Bach suggests in column 3, lines 27-61 and col. 4, lines 1-20 that using such an electronic filter that low pass filters the electronic signal from the photo detector has advantage of allowing selecting the wanted signal and eliminating the unwanted signals and signal noise and increasing the signal to noise ratio.

8. Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vanoli et al (US Patent No. 5,943,147 cited by applicant) in view of Yao (US Patent No. 6,687,423).

Regarding claims 10-12, Vanoli teaches all the limitations of the claimed invention as set forth in the rejection to claim 1 above except fails to teach a free spectral range of the tunable filter is greater than a bandwidth of the signal band of the input signal. However, Yao in US Patent No. 6,687,423 teaches a free spectral range of the tunable filter is greater than a bandwidth of the signal band of the input signal (Fig. 4c, col. 7, lines 27-37 and col. 6, lines 50-57). Therefore, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the free

Art Unit: 2633

spectral range of the tunable filter is greater than a bandwidth of the signal band of the input signal as taught by Yao in the system of Vanoli. One of ordinary skill in the art would have been motivated to do this since Yao suggests in column 7, lines 27-37 and col. 6, lines 50-57 that using such a free spectral range of the tunable filter is greater than a bandwidth of the signal band of the input signal has advantage of allowing ensuring only one channel can transmit through the filter.

9. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vanoli et al (US Patent No. 5,943,147 cited by applicant) in view of Yao (US Patent No. 6,687,423) and further in view of Delavaux et al (US Patent No. 5,646,762).

Regarding claim 13, Vanoli as modified by Yao above teaches all the limitations of the claimed invention as set forth in the rejection to claim 12 above except fails to teach an input filter for separating the filtered signal into a first sub-band and a second sub-band and a first sub-band detector and second sub-band detector. However, Delavaux teaches an input filter for separating the filtered signal into a first sub-band and a second sub-band and a first sub-band detector and second sub-band detector (Fig. 1, col. 2, lines 37-67, col. 3, lines 1-67 and col. 4, lines 1-4). Therefore, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the input filter for separating the filtered signal into a first sub-band and a second sub-band and a first sub-band detector and second sub-band detector as taught by Delavaux in the system of Vanoli modified by Yao. One of ordinary skill in the art would have been motivated to do this since Delavaux suggests in column 2, lines 37-67,

Art Unit: 2633

col. 3, lines 1-67 and col. 4, lines 1-4 that using such an input filter for separating the filtered signal into a first sub-band and a second sub-band and a first sub-band detector and second sub-band detector has advantage of allowing calibration can be performed simultaneously with monitoring. This can be used to accomplish faster and more accurate scanning.

Allowable Subject Matter

10. Claims 14, 17-20, 29 and 30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

11. Applicant's arguments with respect to claims 1-6 and 8-32 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Phan whose telephone number is (571)272-3035.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

Art Unit: 2633

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.

A handwritten signature in black ink, appearing to read 'Hanh Phan', with a stylized, cursive script.

**HANH PHAN
PRIMARY EXAMINER**